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# Educating a New Generation of Library and Information Science Professionals: A United States Perspective

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## Educating a New Generation of Library and Information Science Professionals: A United States Perspective

### Comments

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**Abstract**

This article examines the U.S model of library and information science (LIS) education in light of the changes brought about by information and communication technology. The accepted model of professional preparation in the United States has emphasized graduate education on a Master's level from LIS programs accredited by the American Library Association (ALA). The authors trace the historical development of this approach and provide an overview of the ALA accreditation process. Furthermore, they examine the strategies of LIS programs in adjusting to the changing information environment, present the debate about the iSchool movement, and discuss the evolution of the core curriculum. In addition, the article explores the relationship between LIS education and the field of practice and presents a practitioner's perspective on educating library professionals. The authors conclude that the model of advanced professional preparation for librarianship is still relevant in the digital environment, but it requires greater flexibility and close cooperation with the field of practice.

**Keywords**

Library and information science education, library schools, library and information science curriculum, accreditation, library and information science professionals

# **Educating a New Generation of Library and Information Science Professionals: A United States Perspective**

## **Introduction**

“It is in education that we instill our values and our worldview, in addition to the skills needed by communities” (Lankes, 2011, p. 177).

Concerns about the preparation of new professionals for librarianship have been a constant theme throughout the history of the profession in the United States (Barlow & Aversa, 2006, p. 327; Hall, 2009, pp. 57-60). “The song remains the same, only the names and specifics under debate have changed” comments Hall on the persistence of these discussions (2009, p. 57). The debate, however, has intensified in recent years because of the rapidly evolving information landscape and the transformation of library roles. Many questions arise about the impact of information technologies on the field, the core competencies and skills required from the new generation of library and information professionals, and the role of library and information science (LIS) education and its connection to practice. In addition, the recent economic recession and drastic cuts in library funding have placed new demands on LIS educational programs as new graduates compete for jobs in a market with high expectations but few opportunities (Maatta, 2010, p. 207; 2012, pp. 18-19; Wise, 2013, p. 38). New professionals seeking positions in public and academic libraries in the United States (U.S.) must not only have a Master’s degree from an accredited LIS program to meet the minimum requirements, but also need to demonstrate a wide range of technical competencies and effective communication and collaboration skills. Increasingly, recent graduates also find that having relevant practical experience gives them an edge in the tight job market (Wise, 2013, p. 39).

Different educational models for preparing future library professionals exist throughout the world. LIS education in many European countries, e.g. Denmark and Norway, builds upon a four-year Bachelor’s degree in library science or information studies as an entry point and foundation for more advanced degrees (Audunson, 2007, p. 95). Audunson (2007) notes that “LIS in Europe has developed independently in approximately 30 countries, without a unifying accrediting body comparable to what one finds in the United States and Canada” (p. 94). The preparation for librarianship in Australia and other former British colonies and dominions demonstrates the influence of the British tradition of apprenticeship and vocational training, but in recent years has also been shaped by U.S. library practices and educational models (Carroll et al, 2013; pp. 22-29). The U.S. model puts an emphasis on advanced professional education and the accreditation of LIS programs. This approach to educating library professionals builds upon broad college education and concentrates on a two-year graduate degree in LIS as an essential component of the professional preparation for the field. A Master’s degree from an accredited LIS program represents the minimum requirement for appointment to professional positions in libraries (Lynch, 2008, p. 940). The accreditation process, with the intent to foster excellence and ensure the quality of educational programs, is an important component of this model (American Library Association, 2008). The American Library Association (ALA) Committee on Accreditation is responsible for reviewing and accrediting the LIS programs in the U.S.

The purpose of this paper is to provide an overview of the U.S. approach to preparing a new generation of LIS professionals in light of the challenges encountered in library practice and the changing information environment. The tension between librarianship and information science, the impact of information technologies and the evolving LIS curriculum, and the relationship between LIS education and the field of practice emerge as major themes in the debate

surrounding LIS education in the last 20 years. In addition to reviewing the literature, this paper also examines the preparation of future LIS professionals from the perspectives of two LIS educators and an academic library director who presents the point of view of a future employer.

### **LIS Education: Overview of the U.S. Model**

Formal education for librarianship in the U.S. has a long and rich history going back to the late nineteenth century and the first library school established by Melvil Dewey at Columbia University in 1887. For many years, library schools co-existed with vocational training in the form of apprenticeships and in-service training. The development of library schools was spurred by the fast-growing public library movement in the U.S. and influenced by systematic library education in German universities (Lynch, 2008, pp. 933-937). The first American library schools awarded a Bachelor's degree in library science, but the call for graduate education began relatively early in the history of the profession. The Graduate Library School of the University of Chicago, established in 1926, began offering a Ph.D. in library science in 1928 (Crowley, 2008, p. 113).

The current U.S. model of a two-year Master's program as the accepted norm of professional preparation is largely based on the recommendation of the *Williamson Report*. In 1923 at the request of the Carnegie Corporation, C.C. Williamson surveyed library education in the U.S., recognized the advanced knowledge and skills expected in professional work of librarians, and advocated for graduate-level education programs in universities as professional preparation for librarianship (Lynch, 2008, p. 941; 2010, pp.32-33; Rubin, 2010, p. 85). The library school at the University of Denver was the first to transform its program into the Master's in Library Science (MLS) in 1947 (Bobinski, 2007, p. 114). Other library schools followed, and by the early 1950s most library schools offered Master's degrees in library science (Rubin, 2010, p. 86). Bobinski (2007) notes that "one of the most significant developments in this period was the establishment of the MLS as the basic professional degree" (p.114).

The influential *Williamson Report* also recommended a regular review of curricula and called for a stronger role of the American Library Association (ALA) in coordinating educational efforts for the field (Lynch, 2010, pp.32-33). The ALA has indeed played an important role in articulating the core values and competencies for librarianship and setting standards for LIS education. In response to the *Williamson Report*, the ALA established the Board of Education for Librarianship, which supported graduate education in librarianship. In 1956, the ALA Committee on Accreditation was formed and given the task of reviewing and accrediting Master's programs in library science, a responsibility that it continues to fulfill to this day. Currently, LIS schools and programs in the U.S. offer a variety of programs, from undergraduate degrees in information studies to highly specialized PhDs. However, Master's programs are the only ones that are accredited by the American Library Association. In fact, by accrediting at the Master's level, the profession emphasizes its commitment to having a broad range of interests and knowledge in its ranks.

Graduate students in LIS come from a variety of backgrounds and are not required or expected to have an undergraduate degree in library science or information studies. The goal for Master's programs is to prepare the candidates for the profession with substantial theoretical knowledge, a set of skills, and an understanding of core professional values. As with other professions, the knowledge gained through a Master's program should not necessarily include workplace training for a particular institution, but rather be transferable to a variety of settings.

As of October 2013, there were 57 ALA accredited programs, including seven in Canada and one in Puerto Rico (American Library Association, 2014a).

### ***ALA Accreditation Process***

The purpose of accreditation, in the general sense, is to protect the public's safety and well-being with an assurance that those who have an accredited degree are prepared to serve with the knowledge and skills essential to the profession's function. Fundamentally, accreditation ...assures the educational community, the general public, and other agencies or organizations that an institution or program (*a*) has clearly defined and educationally appropriate objectives expressed as student learning outcomes, (*b*) maintains conditions under which achievement of objectives can reasonably be expected, (*c*) is in fact accomplishing objectives substantially, and (*d*) can be expected to continue to do so. Accreditation serves as a mechanism for quality assessment and quality enhancement with quality defined as the effective utilization of resources to achieve appropriate educational objectives and student learning outcomes. (Cherney, 1990, p. 3)

In higher education in the United States, there is a multilayered system of accreditation encompassing a national, regional, and, as in the case of LIS, specialized professional accrediting bodies. Not surprisingly, this system is influenced by the ideological shifts in culture, particularly politics and governance. The U.S. Department of Education oversees federal legislation related to education at all levels. In addition, the Council for Higher Education Accreditation (CHEA) reviews and regulates the quality of regional and specialized accrediting bodies. CHEA also serves as an advocate for policy and legislative matters related to accreditation in higher education (Council for Higher Education Accreditation, 2014). Colleges and universities (not individual academic programs) are accredited by a regional accrediting body, such as the Middle States Commission for Higher Education and the North Central Association of Colleges and Schools. These regional accrediting bodies are recognized by the Council of Higher Education accreditation (CHEA), which also recognizes specialized accrediting agencies such as the ALA.

Influencing the legislation and regulations affecting education in the United States is the cultural and political demand for accountability of teachers and institutions. In a crude sense, accountability is a direct product of the marketplace mentality.

Accountability describes a relationship between two parties in which four conditions apply: first, one party expects the other to perform a service or accomplish a goal; second, the party performing the activity accepts the legitimacy of the other's expectation; third, the party performing the activity derives some benefits from the relationship; and fourth, the party for whom the activity is performed has some capacity to affect the other's benefits. (Hill & Bonan, 1991, p. 35)

At the heart of the accountability approach are the learning outcomes and the measures used to determine student's success. For the elementary and secondary levels, states have adopted curriculum standards that contain such learning outcomes; measures at this level tend to be driven by state-level standardized testing. Through a political, albeit deliberative process, these curriculum standards are developed to reflect the values and knowledge base that are viewed as essential for becoming a contributor to society, both economically and socially. In the case of higher education, student learning outcomes are set by colleges and universities at the funding level or by the institution

itself. Regardless, these outcomes also reflect the values and knowledge base that are viewed as essential. Specialized education, such as that required for librarians, lawyers, doctors, nurses, pharmacists, engineers, and many other professions, takes a slightly different approach to the establishment of learning outcomes for accredited degree programs.

Some professions, such as law, engineering, and medicine, are governed by federal legislation as well as the authority of professional organizations such as the American Bar Association (ABA) and the American Medical Association (AMA). Both the ABA and the AMA serve as agencies for required credentialing for lawyers and doctors; a lawyer cannot practice without a license from the ABA. These credentialing requirements mean that schools of law or medicine must prepare their students to acquire the knowledge and values that are required for professional practice. Because every lawyer needs to be licensed, every law school must develop learning outcomes that address the areas covered by a licensing exam. Therefore, law schools across the country tend to have similar student learning outcomes. Librarianship does not have a required credentialing system, and, therefore, student learning outcomes are directed by the profession – but not set by it.

The scope of the values and knowledge expected of new professionals is determined by those already practicing the application of those values and knowledge. The American Library Association Committee on Accreditation (COA) has been entrusted with the charge “To be responsible for the execution of the accreditation program of ALA, and to develop and formulate standards of education for library and information studies for the approval of council” (American Library Association, 2014b). ALA-COA relies upon the opinion of the profession to determine the scope of the standards. For example, in regards to the scope of the Master’s degree curriculum, the Standards state that an accredited program must include in its student learning experiences:

- I.2.1 the essential character of the field of library and information studies; that is, recordable information and knowledge, and the services and technologies to facilitate their management and use, encompassing information and knowledge creation, communication, identification, selection, acquisition, organization and description, storage and retrieval, preservation, analysis, interpretation, evaluation, synthesis, dissemination, and management;

And,

## II.3 The curriculum

- II.3.1 fosters development of library and information professionals who will assume an assertive role in providing services
- II.3.2 emphasizes an evolving body of knowledge that reflects the findings of basic and applied research from relevant fields
- II.3.3 integrates the theory, application, and use of technology
- II.3.4 responds to the needs of a diverse society including the needs of underserved groups
- II.3.5 responds to the needs of a rapidly changing technological and global society
- II.3.6 provides direction for future development of the field
- II.3.7 promotes commitment to continuous professional growth. (American Library Association, 2008)

The ALA accreditation review process is driven by the accreditation standards and by the policies and procedures designated for the review of programs. The *ALA Standards for Accreditation of Master's Programs in Library and Information Science* (2008) address the conceptual aspects for programs to incorporate into their offerings. The literal process of review is described in the *Accreditation Processes, Policies, and Procedures (AP3) third edition* (2013).

A LIS program's accreditation status may be one of the following: Continued Accreditation or Conditional Accreditation. A pre-candidacy status refers to programs that have not yet submitted all documentation for review to be granted Continued Accreditation status. A review process for a Continued Accreditation program typically follows this structure:

1. Every year, the program submits statistical data, such as student enrollment and financial data.
2. Every other year, the program submits a narrative describing the program's efforts in educational delivery as these efforts relate to the Standards.
3. Every seven years, the program develops a comprehensive program presentation document that is reviewed by an onsite External Review Panel comprised of trained practitioners and LIS educators, and also by the COA (also comprised of LIS educators and practitioners).
4. Following the onsite review and adjudication by the COA, and if the program meets the Standards, the program is granted Continued Accreditation status.

Conditional Accreditation is granted if a program fails to provide sufficient evidence of meeting the Standards in their totality. This status is not awarded without previous requests from COA for special reports, typically following the COA consideration of annual statistics or the biennial narrative.

### ***Library vs. Information Debate and the iSchool Movement***

ALA accreditation not only provides a mechanism for ensuring standards and an assurance of quality, but also reaffirms the ties between the diverse programs and schools that engage in preparing future library and information science professionals. The diversification of LIS educational programs, the evolution from the library focus towards information studies, and a certain crisis of identity began in the mid-1990s when the impact of information technology on the field became indisputable. Many programs and schools have expanded their curricula in information science, introduced a range of courses in information technologies and related fields, and modified their names by adding "information" in the title or dropping the word "library" altogether. Bobinski (2007) points out that by 2004, 12 of the 45 accredited schools did not have either "library science" or "library" in their official title (p. 120). The movement towards broadening the scope of research and encompassing a wide range of information studies was formalized with the formation of the iSchools Caucus in 2005. iSchools espouse interdisciplinary, research-oriented programs focused on the study of information and information systems in multiple contexts of human activities (Olson & Grudin, 2009, p. 17; Dillon, 2012, pp. 268-271). Libraries represent one of many contexts for studying information, but not necessarily a privileged one (Dillon & Norris, 2005, p. 294; Dillon, 2012, p. 269).

The transformation of the LIS programs – especially the move away from the library focus – met with some resistance in the practice community and sparked a debate about the nature of professional preparation for the evolving field. Michael Gorman (2004), ALA President-Elect at the time, argued that library education was "under assault" (Gorman, 2004, p. 99). An outspoken critic of the shift towards information science in LIS education, he expressed strong disapproval



of the dismantling of the traditional core curriculum (Gorman, 2003, pp.119-121) and lamented the widening gap between educators and practitioners, “a gulf so wide that it seems that each side is speaking a different language” (Gorman, 2005, p. 125). His 2004 article in the *Journal of Academic Librarianship* became the subject of a major debate in the field. Gorman outlined several shortcomings of LIS programs, including the dominance of information science and information technology curriculum at the expense of essential professional preparation, LIS faculty’s lack of interest in traditional library mission and values, and a dearth of research dedicated to librarianship (Gorman, 2004, pp. 99-100). John Berry, Editor-in-chief of *Library Journal* (2004), supported Gorman’s assessment of the crisis in regard to the erosion of library-centered curricula in LIS programs (p. 10). Dillon and Norris (2005) refuted the claims of crisis in LIS education, demonstrating that a standard set of core curriculum is offered across LIS programs and that PhD dissertators are in fact producing research dedicated to library issues (pp. 282-291). The authors disputed the notion of competing library and information paradigms, arguing that the perception of crisis is an indication of the changing field. Staffle and Leeder (2005) interpreted the dissatisfaction with LIS education as a crisis of understanding, with practitioners not fully grasping the complexities of LIS education and the accreditation process (pp. 317-318). They made a distinction between education and training and pointed out that the goal of LIS programs is not to provide specialized training for specific positions, but rather to equip students with a broad education that will serve as a foundation for versatile career paths in the field.

The debate has dissipated with time but has not disappeared entirely. Cronin (2005) observes that many LIS schools have not altered their programs significantly despite changing their names and joining the information school movement (p. 364). Lankes (2011) acknowledges the difference between library and information paradigms and points out that library science is historically bound to a value system, while information science tends to be value-neutral. The core values of librarianship, including intellectual freedom, equal access to information resources, service, learning and literacy, and the preservation of human knowledge remain at the heart of LIS education. Lankes (2011) calls for getting past the L vs. I debate and for the respectful co-existence of both paradigms. He adds, though, that information scientists involved in the education of future library professionals need to be mindful of passing along “a value system and worldview, not simply a set of functions” (p. 172).

The iSchool group has evolved into an international body of affiliated schools and programs, but most U.S.-based iSchools, which have LIS origins, continue to maintain the core LIS curriculum and the ALA accreditation status (Chu, 2012, pp. 7-9). One of the major criteria for joining the iSchool group is to demonstrate substantial sponsored research activity with an average of \$1 million in research expenditures per year over three years (iSchools, 2014). Only large research programs are able to meet these requirements, while smaller LIS programs remain dedicated to educating LIS professionals for the changing library environment. Obviously, the information aspect cannot be ignored, and many non-iSchools take a multidisciplinary approach, emphasizing a specific aspect of librarianship or information science (Chow et al., 2011, p. 2). A comparative study of iSchools and non-iSchools, which offer ALA-accredited Master’s programs, found no significant differences in program requirements and core curriculum at the Master’s level (Chu, 2012, pp. 8-9). The iSchool group offer more courses and new concentrations, but non-iSchools have a higher number of concentrations. iSchools tend to have larger programs with Bachelor’s degrees and PhDs; however, when Master’s programs are considered, both groups appear to be similar (Chu, 2012, pp. 9-15).

### ***The Evolving LIS Curriculum***

The curriculum of the ALA-accredited Master's programs is typically comprised of a set of core courses and electives. All students are required to complete the core, although the number of required courses can vary among programs (Hall, 2009, pp. 63-65; Markey, 2004, pp.324-325). In addition, students can pursue career tracks and gain in-depth knowledge in specialized areas, such as archives, digital libraries, law librarianship, school media, etc. by selecting a concentration of recommended courses. Some of the special tracks can lead to certification or endorsements, as is often the case with school librarianship where certification is required by many states. The core curriculum, however, is intended to provide future professionals with substantial theoretical knowledge, essential competencies, and an understanding of the fundamental values of the profession. The core courses form a basis for a common understanding of librarianship (Hall, 2009, p.57). Since they are required of all students, they also provide an opportunity to discuss core values and instill a sense of professional identity.

The notion of the core and the structure of curriculum has evolved significantly in the last 20 years. Lynch (2008) points to the mid-1990s as the period in which the adoption of information technology resulted in dramatic changes in most curricula of accredited programs in U.S (p. 941). The 1990s also marked the beginning of the transition from the analog to the digital environment in libraries due to the influx of electronic resources, rise of digitization, and automation of library processes and systems. The impact of information technology on the library environment and ultimately on the LIS curriculum cannot be overstated (Hu, 2013, p.1; Riley-Huff & Rholes, 2011, pp. 129-131). Information technology poses a range of challenges as well as opportunities for LIS education, from the integration of technical skills with theoretical concepts to the development of new courses and specializations and new forms of online or hybrid course delivery. The evolving curriculum reflects the efforts on the part of LIS educators to modify educational programs in order to prepare future professionals for the demands of the changing and increasingly technical library environment. Two major trends emerge in the curricular changes: 1.) the revisions in the structure and content of LIS programs, including adjustments in the learning outcomes, the introduction of new experimental or technology-oriented courses, and an increase in specialization, and 2.) the evolution towards information programs (Barlow & Aversa, 2006, p. 340; Markey, 2004, pp. 328-329; Tenopir, 2000, pp.44-45).

The approach taken by LIS programs to address the curriculum areas stipulated by the standards has changed considerably in the last 20 years, in part reflecting the changes in the profession itself. The number of courses in cataloging, collection management, and reference has declined in the core offerings, while information technology and research methods have seen an increase (Hall, 2009, p. 65). Despite these changes, ALA-accredited Master's programs still have in common a set of required courses (Hall, 2009, p. 66; Markey, 2004, pp. 325-326). The common core tends to be focused on six areas, including foundations of library and information science, organization of information, library management, reference or user services, research methods, and information technology. A study analyzing the content of core courses of the ALA-accredited programs indicates an influence of statements of competencies developed by professional organizations, such as ALA (Lester & Van Fleet, 2008, p. 44). *ALA's Core Competencies of Librarianship* (2009) identifies eight areas of basic professional knowledge and skills, and although there is rarely one-to-one relationship, many current core classes correspond to these areas. The latest version of *ALA's Core Competencies of Librarianship* was published in 2009. If there is indeed a strong connection between the LIS core curriculum and competencies

statements as demonstrated by Lester and Van Fleet (2008), *ALA's Core Competences* should be reviewed and updated more frequently. As early as 2004, Markey (pp. 334-335) commented on the declining role of librarians as intermediaries and recommended shifting the emphasis in curriculum from user services to information organization, content creation, authoritative information, and preservation. The emerging areas of Web services, digital librarianship, and digital preservation are not represented in the ALA Core Competences. Many LIS programs, however, offer specializations in these areas.

A recent revision of the LIS curriculum at the University of Denver provides an example of the changes in the required courses. Two authors of this article participated in the revision process and teach some of the core courses. The LIS program at the University of Denver is an ALA-accredited Master's program with an enrollment of approximately 100 students. The program offers a number of special tracks including archives, digital libraries, early childhood librarianship, law librarianship, and school media. The curriculum was revised two years ago and as a result of this process, the number of required courses has been reduced to offer students more flexibility in choosing electives and strengthening their concentrations. While cataloging and reference were removed from the core and are now offered as electives, a new core class focused on user and access services has been introduced. The current list of required classes includes: 1.) Foundations of Library, Archival, and Information Sciences; 2.) Organization of Information; 3.) User and Access Services; 4.) Library and Information Technologies; 5.) Management of Information Organizations; 6.) Education Research and Measurement. Students are also required to complete a practicum in a library setting in order to gain a relevant practical experience. In addition, the program offers a wide range of electives to allow students to develop expertise in a particular area, strengthen their technological skills, and prepare them for professional practice.

### **What Do Employers Expect: An Academic Library Perspective**

A Master's degree in LIS provides the essential credentials for entering the field of practice. Most academic libraries specify this as a requirement (Lynch & Smith, 2001, p. 414) for anyone to be hired as a librarian. There is an expectation that new librarians have acquired not only core professional competencies but also have an enthusiasm and love of learning, regardless from which LIS program they graduated.

In spite of rigorous preparation offered by the ALA-accredited LIS programs, there still exists a perceived skill gap between newly minted librarians and library needs. To a large degree, this is due to the accelerated rate of technological change in libraries which require new skills as well as the fact that most LIS programs have a broader professional scope focused on information science as well as libraries. If we accept the premise that the purpose of LIS schools is to teach students about information acquisition, organization, preservation, and consumption as well as the role information plays in society, then students need to turn these theories into practice through practicums, internships, and field work in the area they wish to pursue. Hands-on learning should be required as part of the curriculum in all schools. Those students who have done a year or even a semester of intensive training are very well prepared for their first professional assignment. Participating in internships and field work offers candidates for the profession the advantage of expanding on their practical skills and applying theoretical knowledge in an actual library setting. Additionally, having a proven record of practical library experience improves the chances of being hired for a professional position.

With cut-backs in academic library budgets, every library is trying to do more with fewer resources. This is evident in our job ads for new librarians, which have long lists of required and desired duties, many of which span different units, skill sets, and competencies. Libraries are responding to changes in the academy and thus are creating new types of positions with less clearly defined parameters. These maverick librarians are expected to be totally conversant with technology and digital tools while being good team players. We look for librarians with a sense of entrepreneurship and nimbleness in dealing with unanticipated problems and rapid change. They must have a strong desire to keep learning since education cannot stop with the attainment of a Master's degree. Can library schools teach these attributes? This is unlikely, but they can be more selective in their acceptance of students into their programs and look at more than just grade point averages. They can push students to understand the underlying theories of technology rather than focus on specific tools or software which quickly become obsolete. Of equal importance are more traditional skills such as excellent oral and written communication and the ability to work well with others on teams.

As employers, our expectation for a new librarian is that this person embraces emerging technologies, is familiar with the standards and current developments in the field, and can apply this knowledge to evaluating new tools. Familiarity with specific tools is desired, hence the relevance of internships that provide experience with specialized software and equipment. Library employers prefer applicants with work experience in addition to the degree, so LIS programs must encourage, nay, require students to acquire skills through work in area libraries where the students undergo intensive training as part of an internship, etc. Furthermore, a student who has worked while in school also has the opportunity to try different jobs, as they may be involved in rotations in the libraries. These experiences help students to confirm their interests and passion while still in school. A student sitting at the reference desk, for example, may suddenly realize that she would rather be designing webpages. Such work, in addition to real workplace skill acquisition, also provides informal mentors and future references who can help to land a permanent job. This type of experience is particularly critical for online students who are not working in a library since they may be missing the socialization that comes from on-site classes.

Libraries now partner with faculty in research and teaching, so academic libraries need staff with skills in data curation and management, digital project coordination, website creation, and collaboration with faculty on digital humanities projects. As Kendrick points out, "modern librarianship also includes instruction, outreach, programming, technological innovation, and active participation in scholarly communication via publishing or content creation " (2013).

Cultural competence is an area that deserves increased attention in LIS education (Overall, 2009, pp. 175-177). The ability to embrace diversity in its broadest form is vital as the face of higher education is changing. Although minority populations represent 34% of the U.S. population, only about 12% of credentialed librarians are minorities (US Census Bureau, 2010). Diversity in the LIS programs needs to increase in order to provide a workforce that is more reflective of our general population. In addition, the globalization of education means we are interacting, teaching, and working with individuals from all corners of the world. We need to prepare librarians to be comfortable in such an environment and to understand cultural differences.

## **Conclusion**

*The Williamson Report* emerged at a time when professional education in the United States was becoming an expectation in many fields of work. As a product of the Industrial Revolution, in which specialization of work and knowledge took hold, expertise became something that could no longer be attained from merely reading a book. It was during the early 1900s that professionalism itself developed its own culture (Abbot, 1988, pp. 3-4). The traditional hallmarks of a profession include regulation of itself, specialized knowledge, and formal education and credentialing. A profession must ensure its future by limiting access to its specialized knowledge in order to cultivate the desirability and value of this knowledge to society as a whole. In the early days of professional librarianship, the systems that libraries used to organize materials were truly specialized, as was the knowledge needed to respond to reference questions of scholars and the public. Therefore, professional library education was necessary in order for one to be a successful practitioner.

Digital technologies and networking capabilities have brought about revolutionary changes in access to information and at the same time have devalued the arcane knowledge of reference librarians. What in the past required a trip to a library and the assistance of a knowledgeable librarian is now easily available with a few keystrokes, although one may not always be sure about the accuracy and reliability of the retrieved information. Nonetheless, the value of providing a specialized reference service has diminished in the environment of ubiquitous and pervasive information. This shift has thus intensified the questions surrounding the role of the traditional model of LIS education. While not new, the debate of whether a Master's degree is necessary to practice librarianship has intensified in the field. For public libraries in the United States, the trend is to hire fewer people with the Master's degree because the work does not demand as much specialized knowledge as in the past (Kelley, 2012, p. 39). Crowley (2008) comments that public libraries are under municipal or county governance, and this emerging trend to "deprofessionalize" library positions is often difficult to resist (p. 123).

Academic libraries, however, still require that their librarians hold Master's degrees, not only because the academic setting in general rewards and expects advanced degrees, but also because of the demands for new types of expertise in digitization, web services, scholarly communication, and digital preservation. Moreover, the explosion of information and ease of information access do not parallel students' skills in evaluating information resources, thus creating an increased need for teaching information literacy skills. The recent *Ithaka S+R Library Survey* has identified that teaching undergraduate research skills and information literacy is a key function of academic libraries and a growing area of support for undergraduate education (Schonfeld & Long, 2014, p. 14).

The expertise expected from the new generation of LIS professionals is highly specialized and indeed does require an advanced professional degree, but the areas of specialization shift from providing information services to teaching information literacy skills. In addition, digital librarianship represents an emergent and rapidly growing area of the library profession. LIS programs need to constantly adjust the curriculum to teach the necessary concepts and digital library skills to prepare new professionals for the emerging areas of librarianship. The essential core of professional education remains the same while the types of specialized knowledge and skills taught reflect the new and changing information environment. In addition, the important role of LIS education in introducing future librarians to the core values of the profession cannot be overlooked. As Lankes (2011) points out, it is in education that "we instill our values and our worldview" and create a sense of professional community (p. 177). By emphasizing the ethical and social aspects of the profession, we can ensure that our graduates become not only skillful

managers of information and facilitators of knowledge, but also defenders of intellectual freedom and advocates for groups in our society that do not have equal access to information.

The model of professional LIS education remains strong in the United States, especially for academic and special librarianship. It builds upon the rich history of LIS education, but at the same time needs to respond to the changing environment to meet the expectations of practice. It requires a great amount of flexibility from LIS educators and a close cooperation with the field of practice, especially in regard to the ALA accreditation requirements. It is highly unlikely that LIS programs will be able to completely eradicate the skill gap or eliminate the learning curve for new librarians given the complexity and breadth of the profession, but with library programs and libraries working together to inform each other of expectations of the marketplace, the gap can be lessened. LIS educators and library professionals can engage in dialogue to prepare new librarians to embrace opportunities for interesting yet challenging careers. Indeed, in our exciting time of rapid change, libraries need the skills that these professionals can contribute to make a positive difference in our society.

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